Dicamba Update

Summary of the label changes that the registrants have agreed to implement for the 2018 use season

- Restricted Use Pesticide (RUP) classification: Use will be restricted to certified applicators only and require federally mandated recordkeeping to address misuse issues and improve compliance with label restrictions
- Enhanced recordkeeping requirements to reinforce label compliance
- Mandatory dicamba or auxin-specific training for all certified applicators to reinforce proper use
- Decrease maximum wind speed during applications to 10 mph (from 15 mph) to reduce potential spray drift
- Application timing limited to between sunrise and sunset to reduce risk of movement during inversions
- Tank clean out language to prevent cross contamination
- Enhanced susceptible crop language and record keeping with sensitive crop registries to increase awareness of risk to especially sensitive crops nearby
- Label clarifications to improve understanding of restrictions, proper use, and compliance in the field

State Regulatory Agency Actions

Once EPA registers a pesticide, it must all be registered in each state before it can be sold and used in that state. State Lead Agencies, typically state departments of agriculture, may use their authority to further restrict use of a federally registered pesticide product, or prohibit the use of the pesticide entirely.

Common elements of the 2017 dicamba label restrictions implemented across affected states include:

- Required dicamba-specific training for applicators (or auxin-specific training)
- Wind speed restriction (maximum 10 mph)

Examples of additional measures some states implemented to further restrict the use of dicamba:

- Restricted Use Pesticide registration (RUP) and record keeping requirements
- Restricting applications to occur only during daylight hours (9 am to 3 pm)
- Limiting maximum tractor speed to 10 mph

Some states took more aggressive measures to curtail off-target movement of dicamba:

- Stop sale/SSURO (MO)
- State emergency rule - 120-day ban on dicamba use (AR)
- Increased civil penalties (AR)
- Limit applications to certain plant growth stages (TN, for the cotton use)

Process Updates

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Deliberative Process / Ex. 5

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Dicamba: State Restrictions Summary for 2017

The following states registered 24c labels intending to further restrict the Federal label (MO, GA, AL, NC, LA, and NY). State Lead Agencies have a mix of authorities and tools at their disposal; not all states registered 24c labels. In general, State Lead Agencies implemented a patchwork of different restrictions for the 2017 season.

Missouri
- Stop Sale, Use or Removal Order (SSURO) issued July 7, 2017 – halted all sales and use of dicamba pesticides for agricultural uses
- Registered 24c labels 6 days after SSURO was issued July 13, 2017 – SSURO lifted
- Wind speed application restriction (10 mph max)
- Applications only permitted between 9 am and 3 pm
- RUP/certified applicators only, enhanced recordkeeping
- Online notification of any dicamba application registered with MDA

Georgia
- Registered 24c labels implementing mandatory training and spray drift management

Alabama
- Registered 24c labels implementing mandatory
- Wind speed application restriction (10 mph max)

North Carolina
- Registered 24c labels implementing mandatory training
- Wind speed application restriction (10 mph max)

Louisiana
- Registered 24c labels implementing mandatory training

New York
- Registered 24c labels implementing mandatory training
- Restricted Use classification

Tennessee
- Restricted applications to certified applicators only
- Required enhanced recordkeeping
- Applications only permitted between 9 am and 4 pm
- Prohibit applications over-the-top of cotton after first bloom

Arkansas
- Implemented mandatory training for 2017
- Ultimately passed an emergency rule banning the sale and use of agricultural dicamba on July 11, 2017 due to unprecedented number of incidents
- Increased civil penalties for misuse.

Mississippi
- Implemented mandatory training prior to purchase
- Restricted Use classification
- Wind speed application restrictions (10 mph max)

Indiana
- Proposed rule: Restricted Use classification of dicamba herbicides

South Dakota
- Restricted Use classification

Florida
- Implemented 2015 Organo-Auxin rule prohibiting sale, distribution, and use of dicamba

Grower Feedback on Proposed Restrictions

Summary: In a series of conversations with many different stakeholders, EPA has engaged growers from different sectors of agriculture related to dicamba. The two most relevant commodity organizations impacted by dicamba use are the National Cotton Council (NCC) and the American Soybean Association (ASA). Both perspectives are summarized below, but also included herein is input from Mississippi Farm Bureau, Mississippi Dept of Ag, and growers from Indiana and North Dakota.

- One grower from Indiana, Mr. Lewis Flohr (765-426-1889; Clinton County, IN), independently contacted EPA directly to voice his concern of dicamba-tolerant technology and his personal experience in June/July 2017 where his soybean crop was damaged from off-field movement from his neighbor's dicamba-tolerant soybean crop which received applications of dicamba. Mr. Flohr highlighted his bad experience with Monsanto and BASF in an attempt to recoup his losses, without success, forcing him to seek compensation directly from his neighbor (and friend) through civil court. Mr. Flohr shared that this technology has turned neighbors, friends, and families against each other, dividing agricultural growers on the issue of dicamba use. Mr. Flohr further stated additional restrictions should be implemented quickly and in time for growers to make informed decisions for the 2018 season.

- Comments were received from Dr. Andrew Thostenson (North Dakota State University Extension service) who represents a number of growers in North Dakota. They believe there is a clear need for this technology because weed resistance is cause for great losses for growers. He further stated that these new tools, if used responsibly, will help to address these complex issues. North Dakota growers recognize there is great utility for the technology. Even the growers who do not use the technology believe that the tool should be available. However, Dr. Thostenson conveyed that objective observers are very concern because many believe off-target issues cannot be effectively managed and cannot be used safely on a routine basis.
  Contact: Dr. Andrew Thostenson (NDSU; 701-231-8050; andrew.thostenson@ndsu.edu)

- National Cotton Council (NCC) representatives and three growers attended a meeting with OPP on 9/14/17 to discuss their first-hand experience with dicamba-tolerant technology and use of Monsanto and BASF's products during the 2017 growing season. Overwhelmingly, the NCC and their growers highlighted the need to retain the utility of dicamba-tolerant technology as the proliferation of resistant weed varieties create havoc throughout the industry. These growers emphasized that 2017 training in Georgia, Alabama, and Mississippi was valuable and important to protect against off-field issues, such as drift. These growers felt strongly that if an applicator follows the label and adheres to the restrictions (e.g., wind directional buffers), the technology can be managed. However, they emphasized that everyone has a part to play in minimizing potential damage.
  Contacts: Steve Hensley (NCC) 202-483-7716; Reece Langley (NCC) 202-745-7805; Lee Cromly (Southern Cotton Growers, GA) 912-842-2700; Nick McMichen (Cotton Grower, AL) 256-312-6716

- American Soybean Association (ASA) and their growers overwhelming support the utility of dicamba-tolerant technology and highlight the need for additional weed management tools in order to manage resistance issues. However, while they want to ensure their growers have access to technology, they maintained that these products must be used in a responsible and safe manner.
  Contact: Renee Munasifi (ASA Washington, DC; 202-969-7040)

- Mississippi representatives from the Department of Agriculture and Mississippi Farm Bureau Federation met with senior leadership at EPA in September 2017 to discuss a number of issues, including use of dicamba. Mississippi was one of the many states that implemented a training program for dicamba and classified the use on dicamba-tolerant crops as restricted use. These state representatives emphasized that the technologies work as long as growers follow the label and adhere to the restrictions that are currently in place.

Contacts: John Campbell (Deputy Ag Commissioner); Chris McDonald (Dir. Environmental Affairs, 601-359-1135); Michael Ledlow (Dir. Bureau of Plant Industry, 662-325-7760); Justin Ferguson (MS Farm Bureau, 662-562-8249); Andy Whittington (MS Farm Bureau, 601-977-4238).

State	Certified comm App.	Comm Exam Fee	Comm License Fee	Recert Period (yr)	Certified private applicators	Private Certified Applicator Exam Fee	Private Applicator License Fee	Recertification Period (yr)	Estimated total noncertified applicators*
Alabama	4078	$125	$45	3	3716	$20	$25	3	9,330
Arkansas	3319			3	19952			5	6,877
Arizona	9264			1	332			1	13,548
Colorado	4181			3	4700			3	15,227
Delaware	1735			1	521			3	5,318
Florida	16755	$250	$200	4	4029	$150	$100	4	68,247
Georgia	11329	$45	$90	5	16721	$0	$0	5	17,670
Iowa	14543	NA	$75	3	21297	$0	$0	3	20,617
Illinois	13563			3	15489			3	26,213
Indiana	10048	$60	$45	2	12822	$60	$20	5	0
Kansas	6391			2	14380			5	15,704
Kentucky	16271			3	13706			3	28,281
Louisiana	5484	$50	$25	3	7751	$50	$20	3	9,327
Maryland	4639			1	3246			3	16,381
Michigan	14610			3	7392			3	37,164
Minnesota	11130			3	17194			3	0
Missouri	9056			3	22421			5	2,857
Mississippi	2275			3	10226			5	20,326
North Carolina	20476	$20	$10	5	15267	$10	$75	3	23,323
North Dakota	5891			3	11657			3	53,223
Nebraska	10465			3	20985			3	13,638
New Jersey	8507			5	1765			5	19,342
New York	18720	$100	$25	3	6637	$100	$450	5	51,971
New Mexico	2576			1	2477			5	2,724
Ohio	13801			3	14036			3	17,775
Oklahoma	12418			5	13291			5	28,043
Pennsylvania	16970			3	18253			3	41,968
South Carolina	5644			5	7073			5	8,993
South Dakota	5896	$0	$0	2	15916	NA	$25	5	0
Tennessee	12394			3	10251			3	23,622
Texas	21367			1	44901			5	56,310
Virginia	8036			2	6911			2	22,023
Wisconsin	15891			5	12833			5	30,819
West Virginia	2168			3	1126			3	4,649
TOTALS	**339,891**			**3**	**399,274**			**4**	**711,510**

*Estimated number of noncertified applicators applying pesticides under the supervision of a certified applicator (total nation-wide is 918,892). EPA estimates that only about 1% of the noncertified applicators (a total of 10,200) work in the agricultural sector.

Follow up items on Dicamba for Administrator Briefing

Certified vs non-certified applicators

- Dicamba is registered for over-the-top (OTP) uses on dicamba-tolerant soybean and cotton in 34 states.
- In those states, based on 2014 data, there are 739,165 certified applicators (combined commercial and private licensed applicators).
- EPA estimates there are about 10,200 noncertified applicators working under the supervision of a certified applicator in the agricultural sector.
- The costs for becoming a certified applicator range from $0 to $550 (average $208), many states requiring an exam fee and a license fee.
- Certifications last from 1-5 years, depending on the state, but average 3 and 4 years for commercial and private applicator certifications, respectively.

Restricting Timing of Application (Sunrise to Sunset)

- EPA's objective for restricting applications during the day was an effort to further enforce label restrictions prohibiting applications during temperature inversions, but provide growers with the greatest flexibility possible early and late in the day.
- Specific time periods (e.g., 9 am to 4 pm) prove to be impractical as it limits the flexibility or creates a smaller window to apply dicamba overall. This is particularly true when comparing southern states to more northern states as northern states experience more daylight hours in the middle of the summer compared to southern states.
- Specific time of day restrictions do not compensate for changes in daylight hours during the course of the year.
- Temperature inversions were one of the more impactful issues causing off-field movement of dicamba that was commonly raised by a wide variety of stakeholders, including both state representatives and registrants.
- Temperature inversions are difficult phenomena to identify, when denser cold air sits on top of less dense warm air. Temperature inversions are most common around the time of sunrise and sunset.
- Applications of a pesticide during an inversion can result in suspended aerosolized pesticide material that can be transported off-target with very little wind.